

R E M A R K S

Claim Rejections - 35 USC section 112

Claims 17-20 were rejected as being preambled "tie bracket" while depending from claims preambled as a 'form'. The preambles to claims 17 and 18 were corrected to be consistent with the "form" preamble, and claims 19 and 20 were cancelled.

Claim Rejections - 35 USC sections 102 and 103

In the Office Action dated November 11, 2002, Claims 106, 8, 12-17 and 19 were rejected under 102 (e) as being anticipated by Serevino (6,308,484). However, this rejection failed to agree with the subsequent paragraphs describing the rejection. In a telephone interview with Examiner Varner on January 31, 2003, the Examiner clarified the error stating that the rejection should have been a section 102 (b) rejection anticipated by Vaughan et al (5,845,449).

Claim 7 was rejected under 35 USC section 103 with Vaughan in view of Serevino.

Claims 9 and 10 were rejected under 35 USC section 103 in view of Vaughan and Cymbala.

Claim 18 was rejected under 35 USC section 103 in view of Vaughan and Sparkman.

The primary reference to Vaughan discloses a concrete forming system with bracing ties wherein the sidewalls of the system form a molded waffle-type concrete wall. The brace ties (best shown in Figs. 3 & 4) extend between the sidewalls of the system bridging said walls. However, not only are the sidewalls different in structure to the insulating panels of the present invention, but the brace ties also depart from the instant tie brackets.

The insulating panels of the instant invention in conjunction with the spanning tie brackets cooperate with one another to form a **modified flat wall** concrete system. The term '**modified**' is used to describe the fact that the exterior surfaces formed are flat having voids and recesses formed therein. Additionally, the tie brackets used to span the void between the insulating panels are of a specific unitary structure having flat plates on either end, which extend the full height of said insulating panels.

The tie brackets are formed of a particular structure which facilitates added strength and minimal material wastage. Figure 2 shows a cross sectional view of intersecting straps orthogonally oriented relative to the lateral surface of said spanning member (18, 20, 22 and 24) and said braces (26 & 28). These straps intersect the

lateral surface of said spanning members and braces at a right angle (i.e., orthogonally) to thereby provide reinforcement. By adding another dimension perpendicualrly oriented, these intersecting straps maximize the strength of the respective member.

The circumferentially closed, rounded openings shown (e.g., 40, 42, 43, 45, 47) are indeed rounded to also facilitate maximal strength of the overall structure of the tie bracket. The preferred materials used to manufacture the tie brackets, e.g., hard plastics and the sort, have more structural integrity throughout the spanning members and braces when rounded corners form the openings.

Furthermore, the arrangement of the openings between horizontal and vertical members produces an intentional array of utility openings. These central openings have respective, dimensions (e.g., 40, 42, 43), extended lengths (e.g., 30, 36) and extended heights (e.g., 45, 47) for utilitarian purposes. Openings with extended heights form the basis of the principal function of facilitating a plurality of cables and conduits, electrical work boxes, etc.; and extended lengths facilitate mechanical seperation horizontally (such as with a saw) without diminishing structural integrity of the remaining sections.

Such a tie bracket and concrete form system is NOT taught in any of the prior art, singularly or in

combination. Vaughan, Serevino and Cymbala are all silent regarding a teaching of a unitary tie bracket having circumferential openings with rounded sides. They are also silent to a tie bracket structure having reinforcements on spanning members and cross braces perpendiculary aligned thereto as is taught in the present invention.

Allowable Subject Matter

Claim 11 was indicated as allowable.

Claim 20 was indicated as containing allowable subject matter. Claim 20 was cancelled and the limitations thereof and those of intervening claims, i.e., claim 19, were added to the corresponding independent claim 12. Therefore, claims 12-18 are now in condition for allowance.

Conclusion

The Applicant wishes to graciously thank Supervisory Patent Examiner Carl Friedman and Examiner Steve Varner for the personal interview on February 12, 2003. Your time and suggestions were very much appreciated.

Claims 1-3 and 5-18 are deemed by Applicant to be in condition for allowance. Applicant respectfully requests that the claims be allowed and the application passed to issue.

Respectfully submitted

A handwritten signature in cursive script, appearing to read "Sonya C. Harris".

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CLEAN VERSION OF TEXT CHANGES TO SPECIFICATION

On page 1, the paragraph starting at line 4 now reads as follows:

- - This application is related to application Serial
Numbers 09/932,095 entitled CORNER FORM FOR A MODULAR
INSULATING CONCRETE FORM SYSTEM and 09/932,081 entitled
MODIFIED FLAT WALL MODULAR INSULATING CONCRETE FORM SYSTEM ,
filed concurrently herewith on August 20, 2000. - -

CLEAN VERSION OF AMENDED CLAIMS

Sub 1. A tie bracket for connecting opposing insulating panels of insulating concrete forms, comprising a first elongate plate, a second elongate plate spaced apart from said first elongate plate, and a web securing said first plate and said second plate in spaced apart relation, wherein said web forms a plurality of circumferentially closed, rounded openings arranged in at least two horizontal rows when said plates are oriented vertically, wherein each said horizontal row includes at least two adjacent said openings; and

said web includes a plurality of vertically spaced apart spanning members extending from said first plate to said second plate, including an uppermost spanning member and a lowermost spanning member, and

said plates extend above and below both said uppermost and lowermost spanning member, and

wherein each said spanning member comprises intersecting straps selectively orthogonally oriented relative to said spanning members thereby maximizing strength thereof.

Sub 5. The tie bracket according to claim 3, wherein said web includes at least one brace connecting at least two of

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said spanning members, wherein said brace comprises intersecting straps selectively orthogonally oriented relative to said brace.

6. The tie bracket according to claim 5, further comprising an upwardly open receptacle having a height greater than the width.

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a4 9. The tie bracket according to claim 3, further comprising at least one circumferentially closed opening located above said uppermost spanning member.

10. The tie bracket according to claim 3, wherein said lowermost spanning member has at least one circumferentially closed, rounded opening formed therein.

Sub 84
AS 12. A form having a first insulating panel formed from expanded foam, a second opposed insulating panel formed from expanded foam, and a tie bracket spanning and connecting said first insulating panel and said second insulating panel, wherein said tie bracket includes a web having a first end embedded within said first insulating panel and a second end embedded within said second insulating panel, said first and second insulating panels having a height, and wherein said web forms a plurality of circumferentially

closed, rounded openings arranged in at least two horizontal rows when said plates are oriented vertically, wherein each said horizontal row includes at least two adjacent said openings; and

wherein said first insulating panel and said second insulating panel each have an upper surface, a plurality of projections formed in said upper surface, a lower surface, and a plurality of notches formed in said lower surface, wherein each said notch is dimensioned and configured to receive said projection therein in close cooperation therewith, and each said notch is directly below one said projection; and

wherein all said notches of one said insulating panel are regularly spaced apart from adjacent said notches of said insulating panel by equal distance intervals,

said notches include a first end notch adjacent to only one other said notch and a second end notch adjacent to only one other said notch,

said insulating panel has a first end and a second end, and

said first end notch is spaced apart from said first end by a distance interval of half the magnitude of the magnitude of said distance intervals between adjacent said notches.

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15. The form according to claim 12, wherein said web includes a first plate located at said end, a second plate located at said second end, a plurality of vertically spaced apart spanning members extending from said first plate to said second plate, including an uppermost spanning member and a lowermost spanning member, wherein each said spanning member comprises intersecting straps selectively orthogonally oriented relative to said spanning members for maximizing strength thereof, said plates extending above and below both said uppermost spanning member and said lowermost spanning member, thereby extending the full height of said first and second insulating panels.

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16. The form according to claim 15, wherein said web includes at least one brace connecting at least two of said spanning members, wherein said brace comprises intersecting straps selectively orthogonally oriented relative to said brace.

17. The form according to claim 15, wherein the uppermost spanning member of said web further comprises an upwardly open receptacle having a width and a height, wherein the height is greater than the width.

18. The form according to claim 15, wherein each said

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panel and said second insulating panel.
